Provisional pathological staging (Core)

The 'pathological staging' must be provided on the pathology report and is therefore a core element. The term 'provisional pathological staging' is used in this dataset to indicate that the stage that is provided may not represent the final tumour stage which should be determined at the multidisciplinary tumour board meeting where all the pathological, clinical and radiological features are available.[1-4]

The latest version of either International Federation of Gynaecology and Obstetrics (FIGO) *or* TNM staging, *or* both, can be used depending on local preferences.[1-4] The FIGO Staging System is in widespread use internationally and is the system used in most clinical trials and research studies. However, Union for International Cancer Control (UICC) or American Joint Committee on Cancer (AJCC) versions of TNM are used or mandated in many parts of the world.[3,4] With regards to updating of staging systems, there is collaboration between FIGO and those agencies responsible for TNM with an agreement to adopt changes to FIGO Staging. Following the introduction of a new FIGO Staging System, this is usually incorporated into TNM (both UICC and AJCC) versions) at a later date. Apart from minor discrepancies in terminology, the UICC and AJCC 8th edition systems are broadly concurrent.

A new FIGO Staging System for cervical cancer was introduced in 2018.[1,2] The main changes from the prior 2009 FIGO Staging System are outlined below and summarised in Table 2:

- The horizontal dimension of 7 millimetres (mm) is no longer considered in defining the upper boundary of a Stage IA carcinoma.
- Stage IB has been subdivided into IB1, IB2 and IB3 based on maximum tumour size.
- Nodal status is included; the presence of nodal involvement upstages a tumour to Stage IIIC, with IIIC1 indicating pelvic and IIIC2 indicating para-aortic nodal involvement. As discussed, the revised FIGO Staging System is now more closely aligned with the TNM Classification.
- Prior FIGO Staging Systems were based mainly on clinical examination, while the 2018 Staging System allows imaging and pathology findings to be taken into account to supplement clinical staging with respect to tumour size and extent in all stages. The notation of r (imaging) or p (pathology) should indicate the parameters that are used to allocate the case to Stage IIIC; for example, if imaging indicates pelvic lymph node metastasis, the stage would be Stage IIIC1r, and if confirmed by pathologic findings, it would be Stage IIIC1p.

Table 2: 2009 and 2018 International Federation of Gynaecology and Obstetrics (FIGO) staging of carcinoma of the cervix uteri.[a]

FIGO staging of carcinoma of the cervix uteri		
	2009	**2018**
Stage I	Carcinoma is strictly confined to the cervix (extension to the corpus would be disregarded).	The carcinoma is strictly confined to the cervix (extension to the corpus should be disregarded).
IA	Invasive cancer identified only by microscopy, with deepest invasion ≤5 mm and largest extension ≤7mm.	Invasive carcinoma that can be diagnosed only by microscopy with maximum depth of invasion ≤5 mm.[b]
IA1	Measured stromal invasion ≤3.0 mm in depth and extension ≤7 mm.	Measured stromal invasion ≤3 mm in depth.
IA2	Measured stromal invasion >3 mm and ≤5 mm with an extension ≤7 mm.	Measured stromal invasion >3 mm and ≤5 mm in depth.
IB	Clinically visible lesions limited to the cervix uteri or preclinical lesions greater than Stage IA.	Invasive carcinoma with measured deepest invasion >5 mm (greater than Stage IA); lesion limited to the cervix uteri with size measured by maximum tumour diameter.[c]
IB1	Clinically visible lesions ≤4 cm in greatest diameter.	Invasive carcinoma >5 mm depth of stromal invasion and ≤2 cm in greatest dimension.
IB2	Clinically visible lesions >4 cm in greatest diameter.	Invasive carcinoma >2 cm and ≤4 cm in greatest dimension.
IB3		Invasive carcinoma >4 cm in greatest dimension.
Stage II	Cervical carcinoma extends beyond the uterus, but not to the pelvic wall or to the lower third of the vagina.	The cervical carcinoma invades beyond the uterus, but has not extended onto the lower third of the vagina or to the pelvic wall.
IIA	Without parametrial invasion.	Involvement limited to the upper two-thirds of the vagina without parametrial involvement.
IIA1	Clinically visible lesion ≤4.0 cm in greatest diameter.	Invasive carcinoma ≤4 cm in greatest dimension.
IIA2	Clinically visible lesion >4 cm in greatest dimension.	Invasive carcinoma >4 cm in greatest dimension.
IIB	With obvious parametrial invasion.	With parametrial involvement but not up to the pelvic wall.
Stage III	The tumour extends to the pelvic wall and/or involves lower third of the vagina and/or causes hydronephrosis or non-functioning kidney. On rectal examination, there is no cancer–free space between the tumour and the pelvic wall.	The carcinoma involves the lower third of the vagina and/or extends to the pelvic wall and/or causes hydronephrosis or non-functioning kidney and/or involves pelvic and/or para-aortic lymph nodes.
IIIA	No extension to the pelvic wall but involvement of the lower third of vagina.	Carcinoma involves the lower third of the vagina, with no extension to the pelvic wall.
IIIB	Extension on to pelvic wall and/or hydronephrosis or non-functioning kidney.	Extension to the pelvic wall and/or hydronephrosis or non-functioning kidney (unless known to be due to another cause).
IIIC		Involvement of pelvic and/or para-aortic lymph nodes (including micrometastases),[d] irrespective of tumour size and extent (with r and p notations).[e]
IIIC1		Pelvic lymph node metastasis only.
IIIC2		Para-aortic lymph node metastasis.

Stage IV	The carcinoma has extended beyond the true pelvis or has involved (biopsy proven) the mucosa of the bladder or rectum. A bullous oedema, as such, does not permit a case to be allotted to Stage IV.	The carcinoma has extended beyond the true pelvis or has involved (biopsy proven) the mucosa of the bladder or rectum. A bullous edema, as such, does not permit a case to be allotted to Stage IV.
IVA	Spread of growth to adjacent organs.	Spread of the growth to adjacent organs.
IVB	Spread to distant organs.	Spread to distant organs.
Notes		
[a] Differences in the two staging systems are highlighted in red text.		
		[b] Imaging and pathology can be used, when available, to supplement clinical findings with respect to tumour size and extent, in all stages. Pathological findings supersede imaging and clinical findings. [c] The involvement of vascular/lymphatic spaces should not change the staging. The lateral extent of the lesion is no longer considered. [d] Isolated tumour cells do not change the stage but their presence should be recorded [e] Adding notation of r (imaging) and p (pathology), to indicate the findings that are used to allocate the case to Stage IIIC. For example, if imaging indicates pelvic lymph node metastasis, the stage allocation would be Stage IIIC1r; if confirmed by pathological findings, it would be Stage IIIC1p. The type of imaging modality or pathology technique used should always be documented. When in doubt, the lower staging should be assigned.

There are several difficulties inherent in the staging of carcinoma of the uterine cervix as follows:[1,2]

1. There are difficulties in obtaining precise tumour measurements in low-stage disease (FIGO Stage IA and IB); this has been discussed in **TUMOUR DIMENSIONS**.
2. Clinical staging, as previously recommended by FIGO, may under- or overestimate true anatomical extent of disease as it does not include information obtained from post-surgical pathology specimens or radiological/surgical techniques which may not be universally available. Reliance on clinical staging tends to occur in underdeveloped or under-resourced countries where surgical facilities and ancillary investigations (such as radiology and pathology) may be limited.[1,2] A provisional FIGO stage should be provided on the pathology report but the definitive stage is assigned at the multidisciplinary tumour board meeting.

A tumour should be staged following diagnosis using various appropriate modalities (clinical, radiological, pathological). While the original tumour stage should not be altered following treatment, TNM systems allow staging to be performed on a resection specimen following non-surgical treatment (for example chemotherapy, radiotherapy); in such cases, if a stage is being provided on the pathology report (this is optional), it should be prefixed by 'y' to indicate that this is a post-therapy stage.

The reference document TNM Supplement: A commentary on uniform use, 5th edition (C Wittekind et al. editors) may be of assistance when staging.[5]

References

1 Bhatla N, Aoki D, Sharma DN and Sankaranarayanan R (2018). Cancer of the cervix uteri. *Int J Gynaecol Obstet* 143 Suppl 2:22-36.

2 Bhatla N, Berek JS, Cuello Fredes M, Denny LA, Grenman S, Karunaratne K, Kehoe ST, Konishi I, Olawaiye AB, Prat J, Sankaranarayanan R, Brierley J, Mutch D, Querleu D, Cibula D, Quinn M, Botha H, Sigurd L, Rice L, Ryu HS, Ngan H, Maenpaa J, Andrijono A, Purwoto G, Maheshwari A, Bafna UD, Plante M and Natarajan J (2019). Revised FIGO staging for carcinoma of the cervix uteri. *Int J Gynaecol Obstet* 145(1):129-135.

3 Brierley JD, Gospodarowicz MK and Wittekind C (eds) (2016). *UICC TNM Classification of Malignant Tumours, 8th Edition*, Wiley, USA.

4 Olawaiye A, Mutch D, Bhosale P, Gress D, Vandenberg J, Rous B, Hagemann I, Otis C, Sullivan D and Washington M (eds) (2020). *AJCC Cancer Staging System for Cervix Uteri, Version 9*, Springer, New York.

5 Wittekind C, Brierley JD, Lee A and van Eycken E (eds) (2019). *TNM Supplement: A Commentary on Uniform Use, 5th Edition*, Wiley, USA.